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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,248	01/04/2006	Mitsuru Uesugi	L9289.05201	8676

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EXAMINER
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WILLIAMS, LAWRENCE B

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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12/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,248	<b>Applicant(s)</b> UESUGI, MITSURU	
	<b>Examiner</b> LAWRENCE B. WILLIAMS	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 2-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>01/04/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because: The examiner suggests applicant delete pages 48-53 since elements of the drawings are labeled and there is no need for a legend for the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claims 1-2 are objected to because of the following informalities: Claim 1 recites

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"... (1) “ in line 4. This type notation is generally used in the specification, not as claim language.

Claim 2 recites “Eq. (1)” in line 4. This type notation is generally used in the specification, not as claim language.

Appropriate correction is required.

3. Claim 2 is objected to because of the following informalities:

a.) The examiner suggests, “lengths” in line 3.

b.) The examiner suggests, (k is a positive integer) in line 4. Appropriate correction is required.

4. Claims 3-6 are objected to because of the following informalities: Claim 3 recites, “... (1)” in line 6. This type notation is generally used in the specification, not as claim language.

Claim 4 recites “Eq. (1)” in line 3. This type notation is generally used in the specification, not as claim language.

Appropriate correction is required.

5. Claim 6 is objected to because of the following informalities: The examiner suggests, (k is a positive integer) in lines 4-5. Appropriate correction is required.

6. Claim 9 is objected to because of the following informalities: Claim 9 recites

"... (3) “ in line 6. This type notation is generally used in the specification, not as claim language.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The preamble of claim 1 recites, “A method of generating spreading codes.... However, a method or process should comprise a series of steps or acts to be performed. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 3 of claim 1 recites, “assuming that.....”. The word assuming is an adjective defined as: taking too much for granted; presumptuous. The examiner suggests, “where e is...”. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is rejected based on its dependency upon rejected claim 1.

9. Claims 3-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 4 of claim 3 recites, “assuming that.....”. The word assuming is an adjective defined as: taking too much for granted; presumptuous. The examiner suggests, “where

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e is....”. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-8 are rejected based on its dependency upon rejected claim 3.

10. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 3 of claim 9 recites, “assuming that.....”. The word assuming is an adjective defined as: taking too much for granted; presumptuous. The examiner suggests, “where e is....”. The examiner suggests applicant rewrite the claim to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10-11 are rejected based on its dependency upon rejected claim 9.

### ***Claim Rejections - 35 USC § 101***

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 1-2 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims attempt to recite a method, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

***Allowable Subject Matter***

13. Claims 1-2 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and U.S.C. 101, set forth in this Office action.

14. Claims 3-8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and claim objections set forth in this Office action.

15. Claims 9-11 would be allowable if rewritten or amended to overcome the rejections(s) under 35 U.S.C. 112, 2<sup>nd</sup> paragraph and claim objections set forth in this Office action.

16. The following is a statement of reasons for the indication of allowable subject matter:  
The instant application discloses a method and apparatus for generating spreading codes. A search of prior art records has failed to teach or suggest, alone or in combination, a method or apparatus using the equation:

“assuming that  $e$  is a base of natural logarithm and that  $N$  is a length of the spreading code:

$C(a, b) = e^{j(2n\pi/N)}$ , where  $n=a \times b$ ,  $a=0 \sim N-1$ , and  $b=0 \sim N-1$ ” as disclosed in claims 1, and 3.

“assuming that  $e$  is a base of natural logarithm and that  $N$  is a length of the spreading code:

$C^*(a, b) = e^{-j(2n\pi/N)}$ , where  $n=a \times b$ ,  $a=0 \sim N-1$ , and  $b=0 \sim N-1$ ” as disclosed in claim 9.

***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a.) Niegel et al. discloses a spreading factor determining the length of the spreading code sequence in US Patent 6,625,136 B1 Spreader For Multiple Data Rates.

b.) Schooler et al. discloses in a programmable code generator in US Patent 6,667,708 B2 Method And System For A Programmable Code Generator.

c.) Gourgue et al. discloses using variable length codes in a CDMA environment in US Patent 6,560,194 B1 Method of Allocating Orthogonal Codes In A Code Division Multiple Access Mobile Radio System Using Codes Of Variable Length.

d.) Feria et al. discloses assigning variable length codes in a CDMA environment in US 2002/0150067 A1 Application of Complex Codes To Maximize User Link Utilization.

e.) Dinan et al. discloses in IEEE Communications Magazine Spreading Codes For Direct Sequence CDMA and Wideband CDMA cellular Networks.

f.) Walley at al. discloses a variable length PN code generator in US Patent 6,744,808 A1 Techniques To Increase Data Transmission Rate Of Spread Spectrum Communications Systems.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 571-272-3037. The examiner can normally be reached on Monday-Friday (8:00-6:00).



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ghayour Mohammad can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lbw  
December 9, 2008

/Lawrence B Williams/

Primary Examiner, Art Unit 2611